

Jenny Marie Dauer

School of Natural Resources

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Professional Experience:

School of Natural Resources Associate Director for Undergraduate Education & Associate Professor in Science Literacy (25% administration, 35% teaching, 40% research)	2019 – present
Assistant Professor in Science Literacy (60% teaching, 40% research) School of Natural Resources, University of Nebraska, Lincoln	2016 – 2019
Assistant Professor of Practice in Science Literacy (75% teaching, 25% research) School of Natural Resources, University of Nebraska, Lincoln	2013 – 2016
Discipline-Based Education Research Post-doc/Carbon TIME Project Director Michigan State University Mentor: Dr. C.W. (Andy) Anderson, Department of Teacher Education	2011 – 2013
Assistant Director of Graduate Education, Huck Institutes, Penn State Univ. The Franklin Institute Science Museum, Program Associate	2005 – 2006 2001 – 2002

Education:

Ph.D. in Ecosystem Ecology Oregon State University, Department of Forest Science Dissertation title: Calcium oxalate in sites of contrasting nutrient status in the Oregon Coast Range. Advisor: Dr. Steven Perakis, USGS	2006 – 2012
Masters in Ecology Penn State University Thesis title: Reasons for differential leaf calcium accumulation in forest trees. Advisor: Dr. David Eissenstat, Department of Horticulture	2002 – 2005
Bachelor of Science with Honors in Secondary Education PA Teacher Certification in Biology, Environmental Science, General Science Penn State University, The Schreyer Honors College Thesis title: Curriculum integration in the home school; possibilities for meaningful learning. Advisor: Dr. J. Daniel Marshall, Curriculum and Instruction Department	1995 – 2000

Grants:

Funded:

1. Co-PI, UNL Grand Challenges planning grant: *Nebraska One Health*, Funded 2022-2023, \$150,000
2. Co-PI, UNL Grand Challenges planning grant: *Serving At-Risk Communities in Disasters: Studying Planning and Response Measures under the Lens of Equity*, Funded 2022-2023, \$150,000
3. PI, NSF-IUSE (#2216214): *Supporting Students' Science Literacy through Collaborative Critical Evaluation of Evidence*, Funded 2022-2025, \$299,983

4. PI, CASNR Holling Innovation Award: *Incorporating Experiential Learning into CASNR's Introductory Core Course, SCIL 101*, Funded 2021, \$20,000
5. PI, NSF EHR CORE BCSER, (#1937657): *Bridging science education and psychology perspectives to support science literacy theory and instruction*, Funded 2019-2023, \$349,836
6. Senior personnel, NSF RCN: *INFEWS/T3 Cultivating a National Collaborative for Research on Food, Energy and Water Education (NC-FEW)*, Funded 2019-2023, \$749,964
7. Co-PI, USDA-NIFA REEU: *Building Undergraduate Research and Science Communication Skills Through Beneficial Insects Protection Research and Extension Experiences (FACT)*, Funded 1/2019-12/2022, \$362,150
8. PI, NSF IUSE (#1711683): *"Decision-making about socioscientific issues in multidisciplinary postsecondary learning environments"* Funded 9/2017 - 8/2020, \$299,969
9. Co-PI, University of Nebraska Collaboration Initiative Seed Grant: *Developing a MOOCocracy Prototype to Increase Public Understanding of Food Insecurity*, Funded 7/2017 - 6/2019, \$149,69
10. Co-PI, USDA-NIFA, 2016: *Excellence in Education for Food, Energy and Water (E²FEW)*. Funded 1/2017 - 12/2019, \$150,000
11. Co-PI, Nebraska Environmental Trust: *Working with rural post-secondary student to document swift fox on Nebraska Ranches*. Funded 6/2015 - 6/2018, \$210,757
12. Senior Personnel/Consultant, EPA Environmental Education: *Classrooms Take Charge*. Funded 11/2016 - 8/2018, \$121,675
13. Senior Personnel/Consultant, EPA Environmental Education: *Classrooms Take Charge*. Funded 7/2014 - 6/2016, \$334,536
14. IANR Faculty Travel Award, 2015 (\$500), 2016 (\$1000), 2018 (\$800)
15. Faculty Mentor, UCARE for Olivia Straka, 2015-2016 (\$2,400)
16. Faculty Mentor, UCARE for Jena Wilson, 2017-2018 (\$2,400)

Pending:

1. PI, NSF-IUSE, 2023: *Incorporating Experiential Learning into a Large-Enrollment Introductory STEM Course*. 6/23 to 5/26: \$299,963 requested.
2. Co-PI, NSF EPSCoR RII Track-2 FEC: *Multipronged Approach for Uplifting Vulnerable Rural Communities Affected by Increased Flooding Risk due to Climate Change*. 8/23 to 8/27: \$6,000,000 requested.

Declined grants (last 5 years):

1. Senior Personnel, NSF National Artificial Intelligence (AI) Research Institutes Accelerating (NSF 22-502), preproposal: *AI Institute for Climate-Smart Agriculture and Forestry (AI-CSAF)*
2. PI, NSF-IUSE, 2021: *Supporting Students' Critical Evaluation of Evidence in Socioscientific Issues Contexts*
3. PI, UNL ORED COVID-19 Rapid proposal, 2020: *Teaching self-efficacy and stress: responses to mid-semester drastic changes in course delivery*.
4. PI, UNL ORED COVID-19 Rapid proposal, 2020: *Bolstering acceptance during a pandemic: documenting and improving accuracy-oriented reasoning in students and members of the public*.
5. Co-applicant, UNL CTT Seeding Student Success: *Transformative Active Learning Projects, 2020: Assessing Social Engagement in Discussions using Yellowdig as a Retention Tool which Empowers Students to Co-Create Knowledge and Build Active Involvement in Learning*.
6. Co-PI, Continental Divide Research Learning Center, National Park Service, 2019: *Foraging knowledge and behavior of Rocky Mountain National Park Visitors*.
7. PI, NSF-CAREER, 2018: *Students' decision-making practices: supporting the use of evidence in community deliberation*
8. Co-PI, USDA-AFRI, SAS, 2018, *Optimizing water and nutrient management with climate resilience for sustainable agricultural intensification*, Letter of Intent.

9. Co-PI, Agronomy and Horticulture Department, UNL, Teaching Enhancement Funding, 2018, *Using games to teach and assess systems thinking in agronomy*.
10. Co-PI, USDA-NIFA REEU, 2017: Streaming Science Electronic Field Trip Production for Engaging Undergraduates in Extension Entomology PK-12 Education and Outreach, \$300,000
11. Co-PI, NSF IUSE/PFE:RED, 2017: *Civil Engineering Education for the Future – Breaking Barriers to Address Big Problems (CEE the Future)* \$1,999,406
12. Co-PI, Rural Futures Institute, 2017: *Community Engagement for Sustainable Communities: Food System Decision-Making* \$19,998

Publications:

1. Smith, C.R., Menon, D., Wierzbicki, A., Dauer, J.M. (2023) Exploring STEM teaching assistants' self-efficacy and its relation to approaches to teaching. *CBE Life-Sciences*. 22(1)
<https://doi.org/10.1187/cbe.22-06-0115>
2. Smith, C., Menon, D., Wierzbicki, A., Dauer J.M. (2023) Teaching Assistant Response to COVID-19: Investigating Relationships Between Stress, Self-Efficacy, and Approaches to Teaching, *Journal of College Science Teaching*. 52(3).
3. Sparks, R.A., Jimenez, P.C., Kirby, C.K., Dauer, J.M. (2022) Using Critical Integrative Argumentation to Assess Socioscientific Argumentation Across Decision-Making Contexts. *Education Sciences*. 12(10), 644 <https://doi.org/10.3390/educsci12100644>
4. Jimenez, C.P., Golick, D., Couch, B., Dauer, J.M. (2022) Developing and evaluating a pollination systems knowledge assessment in a multidisciplinary course, *International Journal of STEM Education*, 9(1), 1-13.
5. Hogan, K.F.E., J.A. Fowler, C.D. Barnes, A.K. Ludwig, D. J. Cristiano, R. Quinones, D. Morales, R. Quiñones, D. Twidwell, J.M. Dauer (2022) New multimedia resources for ecological resilience education in modern university classrooms, *Ecosphere*, 13:e4245, <https://doi.org/10.1002/ecs2.4245>
6. Dauer, J.T., Dauer, J.M., Lucas, L., Helikar, T., Long, T. (2022) "Supporting university student learning of complex systems: an example of teaching the interactive processes that constitute photosynthesis." *Fostering Understanding of Complex Systems in Biology Education – Pedagogies, guidelines and insights from classroom-based research*. Eds: O. B. Assaraf & M.C. Knippels, Springer Nature.
7. Sommers, A., Dauer J.M., White, H., Forbes, C. (2022) Impacts of Faculty Development on Interdisciplinary Undergraduate Teaching and Learning in the Food-Energy-Water Nexus. *Journal of College Science Teaching*. 51(6).
8. Dauer J.M., Sorensen A., Jimenez, J.C. (2022) Using a structured decision-making tool in the classroom to promote information literacy in the context of decision-making. *Journal of College Science Teaching*. 51(6).
9. Lynch L., Babchuck W., Dauer J.M., Heng-Moss T., Golick D. (2021) Transference of citizen science program impacts: A theory grounded in public participation in scientific research. *Diversity*, 13(8), 339; <https://doi.org/10.3390/d13080339>
10. Dauer J.M., Sorensen A., Wilson J., (2021) Students civic engagement self-efficacy varies across socioscientific issues contexts. *Frontiers in Education*, <https://doi.org/10.3389/feduc.2021.628784>
11. Romine, W., Sadler, T. D., Dauer J.M., Kinslow, A.T. (2020) Measurement of socio-scientific reasoning (SSR) and exploration of SSR as a progression of competencies. *International Journal of Science Education*. <https://doi.org/10.1080/09500693.2020.1849853>.
12. Sorensen, A.E., Brown, B., Alfred, A., Fontaine J.J., Dauer J.M. (2020) Student representations and conceptions of ecological versus social science in a conservation course, *Journal of Environmental Sciences and Studies*, 11, 139-149. <https://doi.org/10.1007/s13412-020-00594-w>

13. Alred, A. & Dauer, J.M. (2020) Understanding factors related to undergraduate student decision-making about a complex socio-scientific issue: mountain lion management. *Eurasia Journal of Mathematics, Science and Technology Education*, 16(2):1821.
14. Sommers, A., White, H., Alred, A., Dauer, J.M., Forbes, C. (2019) Teaching Styles and Student Outcomes in Undergraduate Food, Energy, and Water Systems (FEWS) Courses. *Journal of National Colleges and Teachers of Agriculture*, 63(2) 67-77.
15. Goralnik A., Dauer J.M., Lettero C. (2019) Communities Take Charge: Climate Learning and Changemaking in the Science Classroom. *The Science Teacher*, 87(1) 54-59.
16. Alred A., Hartley L.M., Doherty J.H., Harris C., Dauer J.M. (2019) Exploring student ideas about biological variation. *International Journal of Science Education*, 41(12), 1682-1700. <https://doi.org/10.1080/09500693.2019.1635289>.
17. Sutter A.M., Dauer J.M., Forbes C., Kreuziger T., Schubert J. (2019) Sixth grade students' problematization of and decision-making about a wind energy socioscientific issue. *International Research in Geographical and Environmental Education*, 1-15. <https://doi.org/10.1080/10382046.2019.1613586>.
18. VanWormer, E., Mlawa, J., Komba, E., Gustafson, C., Mrema, H., Dauer, J.M. (2018) Using art and story to explore how primary school students in rural Tanzania understand planetary health: a qualitative analysis. *Lancet: Planetary Health*, Vol 2, Special Issue, S18.
19. Sutter A.M., Dauer J.M., Forbes C. (2018) Application of construal level and value-belief-norm theories to undergraduate decision-making on a wildlife socio-scientific issue. *International Journal of Science Education*. 40, 1058-1075. DOI: 10.1080/09500693.2018.1467064.
20. Sorensen, A.E., Corral, L., Dauer, J. M., Fontaine, J.J. (2018) Integrating authentic scientific research in a conservation course-based undergraduate research experience. *Natural Sciences Education*. 47(1), 1-10. doi:10.4195/nse2018.02.0004.
21. Lynch L.I., Dauer J.M., Babchuck W.A., Heng-Moss T., Golick D. (2018) In Their Own Words: The Significance of Participant Perceptions in Assessing Entomology Citizen Science Learning Outcomes Using a Mixed Methods Approach. *Insects* 9(1), 16:1-15.
22. Golick D., Dauer J.M., Lynch L., Ingram E (2017) A framework for pollination systems thinking and conservation. *Environmental Education Research*. DOI:10.1080/13504622.2017.1349878.
23. Sabel J.L., Vo T., Alred A., Dauer J.M., Forbes C.T. (2017) Undergraduate students' scientifically-informed decision-making about socio-hydrological issues. *Journal of College Science Teaching*, 46(6), 64-72.
24. Covitt B.A., Dauer J.M., Anderson C.W. (2017) The Role of Practices in Scientific Literacy. In Schwarz, C., Passmore, C., & Reiser, B. (Eds.) *Helping Students Make Sense of the World Using Next Generation Science and Engineering Practices*. The National Science Teachers Association (NSTA) Press: Arlington, VA.
25. Dauer J.M., Lute M.L., Straka O. (2017) Indicators of informal and formal decision-making about a socioscientific issue. *International Journal of Education in Mathematics, Science and Technology*. 5(2), 124-138. DOI:10.18404/ijemst.05787.
26. Dauer J.M. and Forbes C. (2016) Making decisions about complex socioscientific issues: a multidisciplinary science course. *Science Education and Civic Engagement: An International Journal*, 8:5-12.
27. Dauer J.T. and Dauer J.M. (2016) A framework for understanding the characteristics of complexity in biology. *International Journal of STEM Education*. 3:13
28. Dauer J.M., Doherty J.H., Freed A.L., Anderson C.W. (2014) Connections between student explanations and arguments from evidence about plant growth. *CBE-Life Science Education*, 13:397-409.
29. Dauer J.M., Miller H., & Anderson C.W. (2014). Conservation of energy: An analytical tool for student accounts of carbon-transforming processes. In R. Chen, A. Eisenkraft, D. Fortus, J. Krajcik,

- K. Neumann & A. Scheff (Eds.), *Teaching and Learning of Energy in K-12 Education*. New York: Springer.
30. Dauer J.M., Perakis S.S. (2014) Calcium oxalate contribution to calcium cycling in forests of contrasting nutrient status. *Forest Ecology and Management*, 334:64-73.
 31. Dauer J.M., and Perakis S. (2013) Contribution of calcium oxalate to soil exchangeable calcium. *Soil Science*, 178:671-678.
 32. Dauer J.M., Lettero C., Ocana M., (2011). A review of ethical concepts and moral reasoning integration into climate change curriculum. *Journal for Activism in Science & Technology Education* 3:131-175.
 33. Dauer J.M., Withington J.M, Oleksyn J., Chorover J., Chadwick O.A., Reich P.B., Eissenstat D.M., (2009). A scanner-based approach to soil profile-wall mapping of root distribution. *Dendrobiology* 62:35-40
 34. Dauer J.M., Chorover J., Chadwick O.A., Oleksyn J, Tjoelker M.G., Hobbie S.E., Reich P.B., Eissenstat D.M., (2007). Controls over leaf and litter calcium concentrations among temperate trees. *Biogeochemistry* 86: 175-187.
 35. Johnathan Thompson & Jenny Edwards*, (2008). A landslide is a landslide is a landslide... or is it? Defining landslide potential across large landscapes. *Science Findings*, Issue 101, Pacific Northwest Research Station. *unmarried name
 36. Butler, J. & McCreedy, D. (2007) Science is everywhere: A resource guide. *Parent Partners In School Science*. The Franklin Institute Science Museum. (contributor)

Publications in preparation or review, manuscripts available:

- Sorensen A.E., Alred A, Fontaine J.J., Dauer J.M. Integrating Modeling in a Course Based Undergraduate Research Experience. (In review, *Ecosphere*).
- Jimenez, C.P., Alred, A., Meyer, B., Dauer, J.M. Scientific explanations in a socioscientific issues context: Developing frameworks to describe undergraduate' use of evidence (in preparation).
- Jimenez, C.P., Zwickle, A., Dauer, J.M. "Describing how undergraduate engage with tradeoffs when addressing complex environmental issues using a structured decision-making tool." (in preparation).
- Kirby, C., Sorensen, A., Dauer, J.M. "Defining competencies and proficiency levels in student decision-making for socioscientific issues." (in preparation).
- Kirby, C.K., Smith, C., Sorensen, A.E., Dauer, J.M. "Students' stakeholder identities, certainty of assumptions and evidence-based reasoning about place-based socioscientific issues." (in preparation).
- Sparks, R., Doherty, J., Anderson, C., Dauer, J.M. "Matter and energy at an ecosystem level." (in preparation).

Presentations:

Invited presentations (2012 – present):

1. Dauer, J. M. "Student conceptions of civic engagement in the context of socioscientific issues" University of Utrecht Freudenthal Institute, Utrecht, Netherlands, November, 2022.
2. Dauer, J.M. "Teaching using socioscientific issues to support students' science literacy skills." Keynote address for the American Society for Microbiology Conference for Undergraduate Educators, online, July 13, 2022.
3. Dauer, J.M. "How do we teach evidence evaluation and science informed decision-making?" Empower with Evidence, AAAS Annual Meeting, Philadelphia, PA, February 2022.
4. Dauer, J. M. "Defining Students' Decision-Making Practices for Socioscientific Issues" University of Utrecht Freudenthal Institute, Utrecht, Netherlands, November, 2021.

5. Dauer, J.M. "What are science literacy skills? How do we teach them to students?" Summit on Science Literacy, Princeton Council on Science and Technology, June 15, 2021, virtual.
6. Dauer, J.M. "Understanding and supporting students' science literacy skills: students' reasoning about scientific evidence in the context of controversial socioscientific issues." Biological Sciences, Washington State University, Feb 22, 2021.
7. Dauer, J.M. & Dauer, J.T. "What is complexity? How do people learn about complex systems?" Complex Biosystems Graduate Program Seminar, University of Nebraska-Lincoln, Feb 18, 2021.
8. Dauer, J.M. "Science literacy through structured decision-making tools: lessons from a classroom for broader science communication." Nebraska Department of Natural Resources, May 10, 2019.
9. Dauer, J.M. "A framework for decision-making in a science classroom to promote science literacy" STEM Education Speaker Series, University North Carolina, Greensboro, NC, March, 2019.
10. Dauer, J.M. "Teaching decision-making in the science classroom to promote science literacy" Science Literacy Program at University of Oregon, Eugene, OR, February 2019.
11. Dauer, J.M. "(Science Literacy 101) Science and decision-making for a complex world: a classroom model to promote students' science literacy" IANR All Hands Meeting, January 2019.
12. Dauer, J.M. "A framework for decision-making in a science classroom to promote science literacy" Biological Sciences departmental seminar, Northern Illinois University, DeKalb, IL, Nov 8, 2018.
13. Dauer, J.M. "How to optimize decision making for personal and professional lives" Presentation for the UNL Doctorate of Plant Health program, Nov 1, 2018.
14. Environrun Sustainability Speaker Series, panelist for discussion on local community policy, advocacy, environmental literacy and engagement. Lincoln, NE, October 2018.
15. Dauer, J.M. "A framework for decision-making in a science classroom to promote science literacy" Departmental seminar for the School of Molecular Biosciences, Washington State University, Pullman, WA, April 26, 2018.
16. Dauer, J. M. "How to optimize decision making for personal and professional lives" Presentation for the UNL Applied Plant Sciences Experiential Learning Program, June 16, 2017 and July 27, 2018, July 26, 2019.
17. Dauer, J. M. "Definitions of science literacy and finding models for change" Presentation for the Agronomy & Horticulture Graduate Student Association and Scientific Communication and its Impacts on Policy, Literacy and Education (SCImPLE) Group, January 26, 2017.
18. Dauer, J. M. "Teaching and research in SCIL 101: Science and decision-making for a complex world." DBER seminar at UNL, Oct 6, 2016, Lincoln, NE
19. Dauer, J. M. "Teaching and research in SCIL 101: Science and decision-making for a complex world." Agronomy & Horticulture Seminar Series, Oct 14, 2016, Lincoln, NE.
20. Golick, D and Dauer, J. "Brain Buzz: A framework for exploring pollination systems knowledge of undergraduates." DBER meeting group at UNL, Nov 17, 2016, Lincoln, NE.
21. Dauer, J. "Science Literacy and Decision-making." Re-STEM Institute, University of Missouri, October, 2016.
22. Dauer, J. "Investigating students' ecosystem knowledge and science literacy practices." Ecology and Evolutionary Biology Departmental Seminar, C.U. Boulder, February 2016
23. Dauer, J., Doherty, J., Anderson C.W. "Student learning about tracing matter and energy in ecosystems" Ecology Society of America, Baltimore, MD August 2015.
24. Dauer, J. "Transformations in matter and energy: student learning and inquiry to inform teaching" DBER seminar at UNL, September 5th, 2013, Lincoln, NE.
25. Dauer, J. & Anderson C.W. "Developing a framework for inquiry and argumentation about carbon-transforming process" National Association for Research in Science Teaching (NARST), Puerto Rico, April 2013.
26. Dauer, J. & Anderson C.W. "An inquiry learning progression for carbon-transforming processes" Create 4 STEM seminar series, Michigan State University, March 2013, Lansing, MI.

27. Dauer, J. "Calcium: location, movement and chemical forms in forest ecosystems." Summer Institute, K-12 Science Teacher Workshop, Kellogg Biological Station, June 2012.
28. D'Avanzo, C., Doherty, J., Dauer, J., Hartley, L., Momsen, J. "Whole Course Transformation for Introductory Biology." Introductory Biology Program Conference, Washington, D.C., July 2012.

Presentations (2012 to present):

1. Dauer, J.M., Sparks, R.A. "Can we detect motivated reasoning in students' evidence evaluation of socioscientific issues?" EARLI SIG 20 & 26, Utrecht, Netherlands, September 2022.
2. Dauer, J.M., Sorensen, A.E., Smith, C. "Investigating predictors of students' certainty of assumptions about socioscientific issues." EARLI SIG 8 & 16, Dresden, Germany, August 2022.
3. Sparks, R.A., Dauer, J.M. "Effect of metacognition, emotions and identity on students' reasoning orientation." EARLI SIG 8 & 16, Dresden, Germany, August 2022.
4. Sparks, R.A., Dauer, J.M. "Exploring relationships between students' emotions, cognition, and evidence evaluation regarding a socioscientific issue." Center for Integrative Research on Cognition, Learning and Education, St. Louis, MO April 2022.
5. Sparks, R.A., Dauer, J.M. "Effect of metacognition, emotions and identity on students' reasoning orientation." Center for Integrative Research on Cognition, Learning and Education, St. Louis, MO April 2022.
6. Jimenez, C.P., Zwickle, A., Dauer, J.M. "Describing undergraduates' tradeoffs practices as they make decisions about socioscientific issues." Center for Integrative Research on Cognition, Learning and Education, St. Louis, MO April 2022.
7. Dauer, J.M., Alam, I., Corwin, L.A. "Exploring the concept of scientific civic engagement and its role in developing science literacy skills." NARST, Vancouver, Canada, April 2022.
8. McFarlin, I. I., Chizinski, C. J., Dauer, J. M, Hurley, K., Kaemingk, M., and Pope, K. "Modeling time use among Nebraska recreationists." Oral presentation, 2021 Pathways Conference, September 19 - 22, 2021.
9. Jimenez, P.C., Wierzbicki, A., Dauer, J.M. "How undergraduates engage with tradeoffs when solving complex issues using a structured decision-making tool" Society for the Advancement of Biology Education Research, July 2021.
10. Smith, C., Dauer, J.M. "Teaching assistant efficacy and stress response to the COVID-19 disruption" Inaugural X-DBER Virtual Conference, March 2021.
11. Dauer, J.M., Sorensen, A., Wilson, J "Students' civic engagement self-efficacy varies across socioscientific issues contexts" Inaugural X-DBER Virtual Conference, March 2021.
12. Kirby, C., Dauer J.M. "Defining Skills Required in the Decision-Making Process around Socioscientific Issues" oral presentation, NARST, April 2021.
13. Smith, C., Dauer J.M. "Investigating the relationship between self-efficacy and approach to teaching in undergraduate and graduate teaching assistants" oral presentation, NARST, April 2021.
14. Dauer, J.M., Kirby, C.K., Sorensen, A.E. & Smith, C. "Investigating predictors of students' certainty of assumptions about socioscientific issues." oral presentation, AERA Virtual Conference April 2021.
15. Dauer, J.M., Sorensen, A.E., Smith, C. "Investigating predictors of students' certainty of assumptions about socioscientific issues." European Association for Research on Learning and Instruction, accepted and conference cancelled (Dresden, Germany 2020).
16. Jimenez, P.C., Dauer, J.M "Developing frameworks to describe students' use of evidence in the context of socioscientific issues. Society for the Advancement of Biology Education Research, Aug 2020.
17. Smith, C., Dauer, J.M. "Investigating self-efficacy and approach to teaching in teaching assistants." Society for the Advancement of Biology Education Research, accepted and withdrawn, Aug 2020.

18. Dauer, J.M. Sorensen, A.E., Smith, C. "Investigating predictors of students' certainty of assumptions about socioscientific issues." Society for the Advancement of Biology Education Research, accepted and withdrawn, Aug 2020.
19. Sorensen, A.E., Fontaine, J.J., Dauer, J.M. "Case studies in integrating the 4DEE approach to social and ecological data sense-making." Ecology Society of America, virtual presentation, Aug 2020
20. Sorensen, A.E., Wagner, S., Fontaine, J.J., Dauer, J.M. "Framing around protected species and landowner perceptions and behavior." Ecology Society of America, virtual presentation, Aug 2020
21. Dauer, J.M. "How to Teach for Science Literacy using Structured Decision-Making in College Courses" Ecology Society of America, virtual workshop, Aug 2020.
22. Dauer, J.M., Wilson, J., Sorensen, A. "Student civic engagement in an ecological issue-based course that uses structured decision-making" Ecology Society of America, virtual presentation, Aug 2020.
23. Jimenez, P.C., Wierzbicki, A., Dauer, J.M. "Describing How Students Engage with Tradeoffs During Decision-Making About Socio-Ecological Issues" Ecology Society of America, virtual presentation, Aug 2020.
24. Forbes, C.T., Scherer, H., Sintov, N., Wang, H., Dauer J.M. "Ecoscience Education in the Food-Energy-Water-Nexus: Enhancing Capacity for Transdisciplinary Education and Education Research across Communities" Ecology Society of America, virtual poster, Aug 2020.
25. McFarlin, I., Weaver, G., Dauer, J.M., Chizinski, C. "Foraging in the Northern Great Plains: A Policy Overview." Annual Midwest Fish and Wildlife Conference, St. Paul, MN, Jan 2020
26. Jimenez, P.C., Dauer, J.M. "Decision-making about socioscientific issues in a large post-secondary STEM course: Describing students use of evidence." European Science Education Research Association, Bologna, Italy, September 2019.
27. Lynch L., Babchuck W., Dauer J.M., Heng-Moss T., Golick D. Transference of Citizen Science Impacts. Entomological Society of America North Central Branch Meeting, Cincinnati, March 2019.
28. Jimenez, P.C., Golick D., Couch B. and Dauer J.M. Developing and Evaluating a Pollination Knowledge Assessment Instrument (PKAI) in a Multidisciplinary Undergraduate Course, Ecology Society of America, Louisville KY, August 2019.
29. AE Sorensen, J Brown, A Alred, JJ Fontaine, JM Dauer. 2019. "How do students integrate social and ecological knowledge in a socio-ecological systems class?" Ecological Society of America, Louisville, KY, August 2019.
30. Jimenez, P.C., Alred, A., Meyer, B., Dauer, J.M. "Quality decision-making about socioscientific issues: Developing frameworks describing students' use of evidence" American Education Research Association, Toronto, CA, April 2019.
31. Dauer, J.M, Wilson, J., Sorensen, A. "Civic engagement in an undergraduate science literacy course focused on socioscientific issues and decision-making" American Education Research Association, Toronto, CA, April 2019.
32. P.C. Jimenez, A. Alred, B. Meyer, J.M. Dauer. "Encouraging science literacy: Developing frameworks describing students' use of evidence when solving environmental issues." North American Association for Environmental Education, Spokane, WA, Oct, 2018.
33. A.E. Sorensen, L. Corral, J.J. Fontaine, J.M. Dauer. "Authentic scientific data collection in support of an integrative model-based class: A framework for student engagement in the classroom." Ecological Society of America, New Orleans, LA, Aug 2018. (organized oral session).
34. Sorensen, A.E., Corral, L., Dauer, J.M., Fontaine, J. "Student cognitive processes and argumentation during consensus modeling" Symposium on Forging Integrated Expertise in Graduate Education, Raleigh, NC, June 4-5, 2018.
35. VanWormer, L., Mlawa J., Komba, E., Gustafson, C., Mrema, H., Dauer, J.M. "Using art and story to explore how primary school students in rural Tanzania understand planetary health: a qualitative study." 2018 Planetary Health Annual Meeting, Edinburgh, Scotland, May 2018.

36. Wilson, J., Dauer, J.M. "Civic engagement in an undergraduate course focused on socioscientific issues." UNL Spring Research Fair, Lincoln, NE, April 2018. **Won top poster.
37. Eischen, M., Dauer, J.M. "Student argumentation, knowledge and values related to biofuels." UNL Spring Research Fair, Lincoln, NE, April 2018.
38. Lally, D., Forbes, C. T., Dauer, J.M. "Helping undergraduate students CREATE understanding of scientific and popular media articles about contemporary water issues." NARST, March 2018, Atlanta GA.
39. Jimenez, P.C., Dauer, J.M. "Applying scientific evidence to solving socioscientific issues using a science literacy decision-making tool." NARST, March 2018, Atlanta GA.
40. Dauer, J.M., Alred, A. "A framework for quality decision-making to promote science literacy in a post-secondary classroom." NARST, March 2018, Atlanta GA.
41. Sorensen, A.E., Dauer, J.M., Corral, L., Fontaine, J.J. "Authentic scientific data collection in support of an integrative model-based class." American Geophysical Union, December 2017, New Orleans, LA.
42. Wilson, J., Dauer, J.M. "Civic engagement in socioscientific issues." UNL RED talk, Lincoln, NE, Oct 2017.
43. Dauer, J.T., Alred, A., Dauer, J.M., Niosco, N. "Exploration of undergraduate students' knowledge of community dynamics." Ecology Society of America. Portland, OR, Aug 2017.
44. Jimenez, P.C., Dauer, J.M. "Students' decision-making process within socioscientific issues: the use of a decision-making tool." SABER, Minneapolis, MN, July 2017.
45. Wilson, J., Dauer, J.M. "Civic engagement in an undergraduate course focused on socioscientific issues." UNL Spring Research Fair, Lincoln, NE, April 2017.
46. Dauer, J., Jimenez, P.C. "Supporting students' decision-making about food, energy and water socioscientific issues" Food, Energy & Water Education Poster Symposium, Water for Food Conference, April 2017, Lincoln, NE.
47. Peterson, A. M., Dauer, J., Forbes, C. "Using construal theory to understand students' problemization of a prairie dog socioscientific issue." Food, Energy & Water Education Poster Symposium, Water for Food Conference, April 2017, Lincoln, NE.
48. Golick D, Dauer J, Lynch L, Ingram E. "Brain Buzz: A framework for exploring pollination systems knowledge of undergraduates." Food, Energy & Water Education Poster Symposium, Water for Food Conference, April 2017, Lincoln, NE.
49. Helmke, C., Corral, L., Lute, M., Dauer, J.M., Fontaine, J. J. "Using citizen science to monitor carnivores in Nebraska." Midwest Fish and Wildlife Conference, Feb 2017, Lincoln, NE.
50. Peterson, A. M., Dauer, J., Forbes, C. "Using construal theory to understand students' problemization of a prairie dog socioscientific issue." Midwest Fish and Wildlife Conference, Feb 2017, Lincoln, NE.
51. Peterson, A. M., Dauer, J., Forbes, C. "Student conceptualization of wind energy issues and their decision-making in wind energy education" NARST Annual International Conference, April 2017, San Antonio, TX.
52. Lally, D., Sabel, J., Forbes, C., Dauer, J.M. "Undergraduate Students' Use and Understanding of Scientific and Popular Media Articles" NARST Annual International Conference, April 2017, San Antonio, TX.
53. Alred, A., Dauer J. "Exploring how values influence undergraduate informal and formal decision-making about a wildlife conservation issue." SABER, Minneapolis MN, July 2016.
54. Dauer, J. Lute, M. Straka, O. "Supporting students' formal decision-making about biofuels." SABER, Minneapolis MN, July 2016.
55. Dauer, J. "Teaching tools for agricultural literacy and science-informed decision-making." North American Colleges and Teachers of Agriculture, June 2016, Honolulu, Hawaii.

56. Golick D, Dauer J, Lynch L, Ingram E. "Brain Buzz: A framework for exploring pollination systems knowledge of undergraduates." International Pollinator Conference, July 2016, State College, PA
57. Dauer, J. Lute, M. Straka, O. "Supporting students' formal decision-making about biofuels." STEM retreat Oct 2016, Lincoln, NE
58. Straka, O., Dauer, J. "Science-informed arguments in undergraduates' opinions about biofuels" Spring Research Fair, April 2016, Lincoln, NE.
59. Straka, O., Dauer, J. "Science-informed arguments in undergraduates' opinions about biofuels" School of Natural Resources Elevator Speech Contest, Winning Undergraduate Poster, Feb 2016, Lincoln, NE.
60. Sabel, J., Vo, T., Alred, A., Dauer, J., Forbes, C. "Undergraduate Students' Scientifically-Informed Decision-Making about Water-Based Socioscientific Issues." NARST, Baltimore, MD, April 2016.
61. Golick, D., Dauer, J., Lynch, L., Ingram, E. "Buzz Brains: A framework for exploring pollination knowledge of undergraduates." National Entomological Society of America Meeting, Minneapolis, MN Nov 2015.
62. Dauer, J., Forbes, C. "A socioscientific framework for teaching a general science literacy course." UNL STEM Retreat, Lincoln NE, Oct 2015
63. Golick, D., Dauer, J., Lynch, L., Ingram, E. "Exploring pollination knowledge of undergraduates through interviews." Entomological Society of America, Manhattan KS, June 2015
64. Dauer, J., Forbes, C. "A socioscientific framework for teaching a general science literacy course." SABER, Minneapolis MN, July 2015
65. Alred, A., Doherty, J., Hartley, L., Dauer, J. "Biodiversity literacy: using learning progression frameworks to explore student explanations of species conservation" SABER Minneapolis MN, July 2015.
66. Parker, J., Covitt, B., Dauer, J., & Anderson, C.W. "Student sense making about climate change-related data" NARST, Chicago IL, April 2015
67. Freed, A., Dauer, J., Tompkins, E., & Anderson, C.W. "Do students improve their inquiry practices after Carbon TIME instruction?" NARST, Chicago IL, April 2015.
68. Dauer, J., Doherty, J., Freed, A., & Anderson, C. W. "Connections between student explanations and arguments from evidence about plant growth" SABER, Minneapolis MN, July 2014.
69. Dauer, J., & Anderson, C. W. "Learning from evidence in the context of global climate change." NARST, Pittsburg PA, April 2014.
70. Freed, A., Dauer, J., Doherty, J., Johnson, W., & Anderson, C. W. "Connections between students' explanations and interpretations of arguments from evidence." NARST, Pittsburg PA, April 2014.
71. Dauer, J., & Anderson, C. W. "Learning from evidence in the context of global climate change." Geology Society of America, North-Central Section, Lincoln, NE, April 2014.
72. Dauer, J.M., Miller, H., & Anderson, C.W. "Inquiry and argumentation about carbon transforming processes." NARST, Rio Grande, Puerto Rico, April 2013.
73. Miller, H., Webster, A., Dauer, J.M., & Anderson, C.W. "Alternative Learning Trajectories Toward Understanding Matter and Energy in Socio-Ecological Systems." NARST, Rio Grande, Puerto Rico, April 2013.
74. Dauer, J., & Anderson, C. W. "Learning from evidence in the context of global climate change." Geology Society of America, Denver CO, Oct 2013.
75. Dauer, J. & Anderson C.W. "Student practices during inquiry about carbon-transforming processes" Ecology Society of America (ESA), Minneapolis, MN, Aug 2013
76. Dauer, J. & Perakis, S. "Role of Ca oxalate in controlling Ca/Sr discrimination and $^{44}\text{Ca}/^{40}\text{Ca}$ fractionation" ESA, Minneapolis, MN, Aug 2013
77. Dauer, J. & Anderson C.W. "Student learning about tracing matter and energy in ecosystems" SABER, Minneapolis MN, July 2013

78. Dauer, J. & Anderson C.W. "An inquiry learning progression for carbon-transforming processes" NARST, Puerto Rico, April 2013
79. Miller, H., Webster A., Dauer, J., Anderson C.W. "Alternative learning trajectories toward understanding matter and energy in socio-ecological systems" NARST, Puerto Rico, April 2013
80. Dauer, J. & Anderson C.W. "Carbon TIME Project: Inquiry Activities and Learning Progression" Ecological Society of America, Portland, Oregon, Aug 2012
81. Dauer, J. & Anderson C.W. "Carbon TIME Project: Inquiry Activities and Learning Progression" CREATE for STEM at MSU, May 2012.

Older presentations venues:

Ecological Society of America, Austin TX, 2011; Pittsburgh, PA, Aug 2010; Montréal, Canada, Aug 2005; Portland OR. Aug 2004; Savannah GA. Aug 2003
 Biogeomon International Symposium on Ecosystem Behavior, Helsinki, Finland, June 2009.
 Forest Science Symposium, Oregon State University, Corvallis, OR, May 2009, May 2007.
 Northeast Ecology and Evolution Conference, University Park, PA, March 2005.
 Penn State University Environmental Chemistry Symposium, University Park, PA. March 2004.
 Cornell University Plant and Soil Symposium, Ithaca NY. April 2003.

Undergraduate Teaching Experience:

University of Nebraska-Lincoln

Science and Decision-making for a Complex World (SCIL 101): 2 sections Fall 2016, Spring 2017, Spring 2018, 2 sections Fall 2018, Fall 2019, Summer 2020, Fall 2020, Fall 2021. Under the title *Intro to Agriculture and Natural Resources* (AGRI/NRES 103): Fall 2014, 2 sections Fall 2015, Spring 2016. An interdisciplinary science course with ~120 students per section. Serving as the lead instructor responsible for curriculum development for all sections encompassing ~600 students per year.

Teaching Undergraduate Science (SCIL 488/888) 1-credit course Spring 2018, 2019, 2020, 2021, 2022

Nebraska Canid Project (NRES 498) 1-credit course Fall 2016

School of Natural Resources Seminar (NRES 891) Fall 2015

Fundamentals of Biology (LIFE 121) Evolution, Ecology and Organisms, 2 sections of ~120 in Spring 2014

Michigan State University

Biological Science, Organisms and Populations, 120 students. Fall 2011

Science for Elementary Schools, 20 students Fall 2012

Linn-Benton Community College

Introductory Soil Science, 12 students Fall 2009

Mentoring:

Post-doc Mentoring:

Jennifer Teshera-Levy, University of Nebraska-Lincoln, School of Natural Resources 2022 – present
 P. Citlally Jimenez, University of Nebraska-Lincoln, School of Natural Resources 2021 – 2022
 Rachel Sparks, University of Nebraska-Lincoln, School of Natural Resources 2021 – present

Caitlin Kirby, University of Nebraska-Lincoln, School of Natural Resources	2020 – 2021
Cody Smith, University of Nebraska-Lincoln, School of Natural Resources	2019 – 2021
Amanda Sorensen, University of Nebraska-Lincoln, School of Natural Resources	2017 – 2019
Michelle Lute, University of Nebraska-Lincoln, School of Natural Resources	2015 – 2016

Graduate Student Advising:

Sumaiya Tabassum, PhD, University of Nebraska-Lincoln, SNR	2021 – present
Pamela Martinez-Oquendo, PhD, University of Nebraska-Lincoln, SNR	2021 – present
F. John Hay, PhD, University of Nebraska-Lincoln, SNR	2019 – present
Iris McFarlin, MS, University of Nebraska-Lincoln, SNR	2019 – 2021
P. Citlally Jimenez, PhD, University of Nebraska-Lincoln, SNR	2016 – 2021
A. McKinzie (Peterson) Sutter, MS, University Nebraska-Lincoln, SNR	2015 – 2017
Ashley Alred, MS, University of Nebraska-Lincoln, School of Natural Resources	2014 – 2016

Graduate Student Committee member:

Jess Walker, MS, University of Nebraska-Lincoln, School of Biological Sciences	2022 – present
Aldi Airori, MS, University of Nebraska-Lincoln, School of Natural Resources	2021 – present
Dan Alberts, PhD, University of Nebraska-Lincoln, Biological Systems Engineering	2021 – present
Crystal Uminski, PhD, University of Nebraska-Lincoln, School of Biological Sciences	2020 – present
Katie Patterson, PhD, University of Nebraska-Lincoln, Chemistry	2019 – present
Annika Kraft, PhD, University of Nebraska-Lincoln, Chemistry	2019 – present
Anna Oetting, MS, University of Nebraska-Lincoln, School of Natural Resources	2021 – 2022
Jordan Bader, PhD, University of New Hampshire	2018 – 2022
Bridget Gross, MS, University of Nebraska-Lincoln, Entomology	2018 – 2021
Ella Burnham, PhD, University of Nebraska-Lincoln, Statistics	2019 – 2021
Brianne Wolf, MS, University of Nebraska-Lincoln, SNR	2019 – 2021
Anuoluwapo Fasanmi, University of Nebraska-Lincoln, Chemistry	2019 – 2021
Shana Winkel, PhD, University of Nebraska-Lincoln, Animal Science	2018 – 2020
Diane Lally, PhD, University of Nebraska-Lincoln, SNR	2017 – 2020
Emily Reif, MAS, University of Nebraska-Lincoln, SNR	2019 – 2020
Erin Ingram, PhD, University of Nebraska-Lincoln, Entomology	2014 – 2019
Louise Lynch, PhD, University of Nebraska-Lincoln, Entomology	2013 – 2016

Undergraduate Mentoring - Independent Research Projects:

Ethan Sajko	2022 – present
Katherine Ingebretsen	2022 – present
Olivia Hultman (honors thesis reader)	2021
Audrey Harrod, Illinois State Univ, UNL Beneficial Insects Summer REEU	2021
Annette Wierzbicki	2019 – 2020
Sierra Wagner	2019 – 2020
Grace Weaver	2019
Xavier Mack, Penn State Univ, UNL Beneficial Insects Summer REEU	2019
Blaine Meyer	2018 – 2019
Alese Sanders	2018 – 2019
Emily Hergenrader (honors thesis reader)	2018
Emily Reif (honors thesis reader)	2018
Jena Wilson, University of Nebraska-Lincoln UCARE student	2016 – 2018
Madeline Eischen (honors thesis)	2016 – 2018
Lexus Wellman	2016

Jessica Thompson, University of Nebraska-Lincoln	2015
Olivia Straka, University of Nebraska-Lincoln UCARE student	2014 – 2015
Courtney Lannen, Michigan State University	2011 – 2012
Danielle Heston, Oregon State University	2008 – 2009
Jonathan Kravitz, Penn State University	2003 – 2004
Steven Wysinger (Tuskegee University), Penn State University	2004 – 2005

Service, Leadership and Professional Activities (past 5 years):

Department:

SNR Graduate Student Association Faculty Advisor	2015 – present
Leader and founding member, Natural Resources Diversity and Inclusion	2015 – 2020
Faculty Search Committee, Assistant Professor Position, School of Natural Resources	2018
SNR Seminar Committee	2014 – 2016
SNR Social Committee	2014 – 2016
Faculty Search Committee, Assistant Professor Position, School of Natural Resources	2015
Environmental Studies Poster Judge - 2014, 2015, 2018, 2019	2014 – 2019
Volunteer, UNL School of Natural Resources annual NaturePalooza outreach	2014, 2015
Outdoor Science Laboratory Development Committee	2013 – 2014

College:

Council for Resilience Education, Student Organization Advisor	2021 – present
CASNR Communities of Practice: Building Communities in the Classroom, Co-Leader	2020
Faculty Search Committee, Assistant Professor Position, Biochemistry	2020
Working Group to draft College-level Learning Outcomes, CASNR	2019 – 2021
Student Course Evaluations Advisory Committee, CASNR	2018 – 2019
Faculty Search Committee, Professor of Practice Position, School of Biological Sciences	2018
Volunteer, STEM activities for K-12 Lincoln Public School teachers	2018
Natural Resources Diversity Initiative Student Organization Faculty Advisor	2016 – 2020
Volunteer, STEMMING into the Future K-12 outreach, NE State Fair	2015
Prairie Corridor on Haines Branch Committee	2014 – 2015

University:

Student Success Faculty Fellow, UNL	2019 – 2020
Student Course Evaluations Task Force, UNL	2018 – 2019
UNL Chancellor’s Commission on the Status of Women	2017 – 2020
UNL Discipline-based Educational Research Organization Leadership	2013 – 2018
Imposter Syndrome Workshop Facilitator, UNL	2016
UNL Spring Research Fair Poster Judge	2016

National/International Community:

Organizing Board and Facilitator, Science Literacy Summit, Princeton University	2021
Facilitator “How to be an Anti-racist” bookclub for Society for the Advancement of Biology Education Research (SABER)	2020
Ecosphere Editorial Board & Subject Editor, Education subject track	2019 – present
Board of Governors of the Center for Great Plains Studies, Academic Affairs Standing Committee	2019 – 2022
NSF Review Panelist 2018, 2021, 2022	
Multistate Research Planning Committee USDA NCDRC231 - Collaborative for Research On Food, Energy and Water Education	2017

Learning Progression for Place & Region, (NSF, RCN), Workshop in Manhattan KS 2016
 Mentor, Community for Advancing Discovery Research in Education 2015 – 2016
 Advisory board member, NSF IUSE, *Put up your dukes and everybody wins: Investigating deliberative argumentation in large lecture biology*, Washington State University 2018 – 2021
 Advisory Board Member, USDA NIFA HEC, 2019, *Supporting Undergraduate Teaching and Learning about Socio-Hydrological Challenges through Data-Driven Modeling in the FANH Sciences*, PI's at UNL and University of Louisiana 2021 – 2024

Ad-hoc Journal Reviewer (last 5 years)

- CBE- Life Sciences Education
- Journal of Geosciences Education
- The Institute for Effective Education (TIEE)
- Eurasia Journal of Mathematics, Science and Technology Education
- International Journal of Education in Math, Science & Technology
- Journal of Research in Science Teaching
- Water (MDPI)
- Journal of Chemical Education
- Journal of Geoscience Education

Requests to serve as an expert (Advisory Board or Steering Committee) on federal grant proposals:

1. Advisory Board/Expert Panel, NSF AISL, “Developing an Assessment for Measuring changes in Functional Botanical Literacy in an informal STEM education environment.” PI Callis-Duehl & Parsley, Dansforth Institute.
2. Expert panel, NSF IUSE, 2021 “Collaborative Creation of a Functional Botanical Literacy Theory: A Workshop Approach.” PI Callis-Duehl & Parsley, Dansforth Institute.
3. Expert panel, NSF IUSE, 2021 “How do we assess changes in undergraduate students’ decision-making ability regarding socioscientific issues?” PI Callis-Duehl & Parsley, Dansforth Institute.
4. Advisory Board Member, NSF CAREER, 2020 “Understanding metacognition development and its role in undergraduate biology major success.” PI J. Sabel at University of Memphis.
5. Advisory Board Member, NSF IUSE, 2018, “Evo-Med-Ed: an integrative approach for teaching and learning human evolution in undergraduate biology.” PI’s at Michigan State University.
6. Advisory Board Member, USDA-NIFA CBG, 2018, “Training students in sustainable development of socioecological systems through problem-based and experiential learning.” PI at University of Arkansas at Pine Bluff.
7. Advisory Board Member, NSF IUSE, 2017, “Put up your dukes and everybody wins: Investigating deliberative argumentation in large lecture biology.” PI’s at Washington State University.
8. Collaborating Mentor, USDA-NIFA, 2017, Postdoctoral fellowship for Zhian Kamvar: *Developing a Reproducible Research Curriculum from Real-World Examples in Agriculture*.
9. Steering Committee and founding member, NSF Research Coordination Network-UBE, 2016: *RELATES: Research Establishing & Linking Argumentation to Education in Science*
10. Advisory Board Member, NSF REAL, 2013, “Bio-ENGARD: Experiential Navigation of Graphical And Reasoning Decisions in Biology.” PI’s at Purdue University.
11. Advisory Board Member, NSF DRK-12, 2013, “SPICE: Science Practices in Inquiry and Critique for Environmental Literacy.” PI’s at Cary Institute of Ecosystem Studies.

Professional Fellowships, Awards & Recognition:

Social Engagement Teaching Fellow, UNL

2020

Faculty Leadership in Academia: from Inspiration to Reality (FLAIR), UNL	2020
Daugherty Water for Food Global Institute Faculty Fellow, UNL	2020
Gaining expertise on leading change at the university by reviewing research literature, studying data, and discussing university initiatives surrounding student success.	
Faculty Fellows for Student Success, UNL	2019-2020
Gaining expertise on leading change at the university by reviewing research literature, studying data, and discussing university initiatives surrounding student success.	
Holling Family Award for Teaching Excellence, UNL	2017
Recognizes exceptional teaching within the College of Agriculture Sciences and Natural Resources	
Research Development Fellow Program, UNL	2016 -2017
Selected to participate from a candidate pool with a 50% acceptance rate. The RDFP is designed to help jumpstart research programs by providing access to information and resources to successfully pursue external grant funding.	
Center for Great Plains Studies Faculty Fellow	2016 – present
Nominated for an Inspire Award, recognizing women leaders in Lincoln, NE	2016
Community for Advancing Discovery Research in Education (CADRE) Fellow	2012 – 2013
An NSF-funded program that is a capacity building experience for early career researchers to gain experience in STEM education research and grant finding. One of 10 Fellows selected from competitive national pool.	
Scholar, Faculty Institutes for Reforming Science Teaching (FIRST IV)	2011 – 2013
An NSF-funded program that trains post-doctoral researchers in active learning pedagogy over the course of two years via 1) two 2-week intensive workshops 2) development of an introductory biology course with colleagues 3) teaching with active mentoring by experts in the field of undergraduate education.	
Science Curriculum Development & Design:	
Science and Decision-Making for a Complex World, UNL	2014 – present
Lead instructor developing innovative curriculum for a freshman level course required by all students (600 per year) in the College of Agriculture and Natural Resources at UNL.	
Classrooms Take Charge	2014 – 2018
Wrote curriculum designed to support student understanding of matter and energy transformation in human energy systems and engagement in service learning around carbon dioxide emissions reductions behaviors for 20+ classrooms in the Pacific Northwest. Funded by EPA EE grant.	
Carbon TIME (Transformations in Matter & Energy) Project Director	2011 – 2012
Wrote learning progression-based teaching units on carbon-transforming processes for 6 th to 12 th grade, including extensive revision and development based on research of students and teacher feedback. Available publicly: https://carbontime.create4stem.msu.edu/	

Curriculum Development Consultant, Climate Change and Behavior 2009 – 2010
Created and piloted a set of lesson plans for K-12. Published and distributed by Bonneville Environmental Foundation.

The Franklin Institute Science Museum, Program Associate 2001 – 2002
Developed and conducted inquiry-based science workshops for multi-generational audiences of 200+ participants. Liaison between the museum and three highly diverse inner-city elementary school science programs.

Women in Science and Engineering Girl's Camp 2004, 2005
An inquiry workshop independently developed and chosen from a campus-wide entry pool at Penn State.

BeyondBooks.com 2000
Managed a team of researchers that designed interactive educational programs and created online lesson plans.

Facilitating Professional Development of K-12 and Postsecondary Instructors:

How to Teach for Science Literacy (& Ecological Literacy) using Structured Decision-Making in College Courses, Ecology Society of America Annual Meeting Workshop Aug 2020

Teaching decision-making in the science classroom to promote science literacy faculty workshop at University of Oregon, Eugene, OR Feb 2019

Overview of the LA Model, UNL Century Club -UNL faculty with class size <100 April 2018

E2FEWs Workshop for faculty at UNL Dec 2017, March 2018, May 2018

Classrooms Take Charge Workshop, 2 days w/ 12 middle school teachers, Corvallis, OR June 2017

"Teaching for the 21st Century" Postsecondary Faculty Workshop, UNL April 2016
Invited active learning workshop attended by ~15 UNL faculty, Love Library, Lincoln, NE

Classrooms Take Charge Workshop, 2 days with 17 high school teachers, Corvallis OR Aug 2015

Project Director for Carbon TIME (Transformations in Matter & Energy) Primary facilitator and developer of 10 professional development workshops with ~ 40 teachers to support their use of our curriculum, and data collection including training to perform clinical interviews. Workshops were 1 to 3 days and both face-to-face and long-distance between 2011-2013.

Kellogg Biological Station K-12 Partnership Facilitated and developed 5 professional development workshops for in-service teachers during one-day workshops and week-long summer institute between 2011-2013.

Scholarships and Awards:

R. Spaniol/H.J. Andrews Exper. Forest Writing Retreat Grant, June 2010
Harry and Mildred Fowells Fellowship, April 2010, OSU College of Forestry

Meier Education Fund Fellowship, April 2009, OSU College of Forestry
Waring Travel Award, April 2008, OSU College of Forestry
Cathy Bacon Fellowship, April 2007, OSU College of Forestry
Global Fund Award for travel to Costa Rica, Feb 2004, PSU
J. Brian Horton Memorial Award, March 2004, PSU Ecology
Root Biology Fellowship. Summer 1997. Penn State University

Professional Memberships:

National Association for Research on Science Teaching (NARST)
Society for the Advancement of Biology Education Research (SABER)
American Educational Research Association (AERA)
European Science Education Research Association (ESERA)
European Association for Research on Learning and Instruction (EARLI)
Ecological Society of America (ESA) Education Section
American Association for the Advancement of Science (AAAS)

Diversity, Equity and Inclusion Experiences:

Worked in highly diverse inner-city schools in Philadelphia during 2001-2002. Taught at a community college with a diversity of age and cultural groups in 2009. Mentored undergraduate researchers in independent research summer programs with emphasis on supporting underrepresented students throughout my career, and advised underrepresented graduate students. Developed and lead the diversity and equity group (NRDI) in my department for 5 years (2015-2020). Led initiatives at UNL to support women in STEM including better parental leave policies for faculty, staff, post-docs and students for 3 years as part of the Chancellor's Commission for the Status of Women (2017-2020). Led small-group discussions on anti-racism in SABER and within SNR (2020-2021). Strong advocate for inclusive teaching practices and programs to support student success and retention within my department and college roles. Actively attends workshops, discussions and opportunities to learn about diversity, equity and inclusion and advocates for progress.

International experiences: Traveled abroad extensively including several months of coursework in England, coursework and travel in Peru, ecology research in Poland and Costa Rica and professional development faculty fellowship in the Netherlands (2022-2023). Some Spanish language skills.